

**LISTING OF CLAIMS**

1. – 6. (Cancelled).

7. (New) A capillary array comprising:

a plurality of capillaries, each being provided with a sample injection port and an electrophoresis medium injection port for injection of an electrophoresis medium;

a voltage application portion, which holds the sample injection ports spread from one another, provided with a plurality of electrodes to be immersed in a sample liquid together with the sample injection ports;

a light detection portion in which the capillaries are aligned substantially on a plane;  
and

an electrophoresis medium supply portion, which holds the electrophoresis medium injection ports in a bundle, in communication with an electrophoresis medium container.

8. (New) A capillary array electrophoresis apparatus comprising:

a plurality of capillaries, each being provided with a sample injection port and an electrophoresis medium injection port for injection of an electrophoresis medium;

a voltage application portion, which holds the sample injection ports spread from one another, provided with a plurality of electrodes to be immersed in a sample liquid together with the sample injection ports;

a light detection portion in which the capillaries are aligned substantially on a plane;

an electrophoresis medium supply portion which holds the electrophoresis medium injection ports in a bundle;

a power source which is capable of applying a voltage between the sample injection ports and the electrophoresis medium injection ports and is electrically connected to the plurality of electrodes;

an electrophoresis medium container, in communication with the electrophoresis medium supply portion, for injecting the electrophoresis medium into the capillaries; and

an optical system which irradiates light to the light detection portion and detects emission light from the sample liquid.

9. (New) A capillary array comprising:

a plurality of capillaries, each having a sample injection port and an electrophoresis medium injection port for injection of an electrophoresis medium, said plurality of capillaries being provided with a protective film;

a voltage application portion having a plurality of metal tubes into which the capillaries are inserted, the voltage application portion thereby holding the sample injection ports;

a light detection portion having a substrate on which portions of the plurality of capillaries are arranged, the portions of the plurality of capillaries having no protective film formed thereon; and

an electrophoresis medium supply portion, which holds the electrophoresis medium injection ports in a bundle, in communication with an electrophoresis medium container.

10. (New) A capillary array electrophoresis apparatus comprising:

a plurality of capillaries, each being provided with a sample injection port and an electrophoresis medium injection port for injection of an electrophoresis medium, said plurality of capillaries being provided with a protective film;

a voltage application portion having a plurality of metal tubes into which the capillaries are inserted, the voltage application portion thereby holding the sample injection ports;

a light detection portion having a substrate on which portions of the plurality of capillaries are arranged, the portions of the plurality of capillaries having no protective film formed thereon; and

an electrophoresis medium supply portion which holds the electrophoresis medium injection ports in a bundle;

a power source which is capable of applying a voltage between the sample injection ports and the electrophoresis medium injection ports and is electrically connected to a plurality of electrodes;

an electrophoresis medium container, in communication with the electrophoresis medium supply portion, for injecting the electrophoresis medium into the capillaries; and

an optical system which irradiates light to the light detection portion and detects emission light from a sample liquid.

11. (New) A capillary array according to claim 7, wherein on each surface of the capillaries a protective film is provided and at the light detection portion the protective film of each capillary is removed.

12. (New) A capillary array electrophoresis apparatus according to claim 8, wherein on each surface of the capillaries a protective film is provided and at the light detection portion the protective film of each capillary is removed.

13. (New) A capillary array according to claim 7, wherein each of the electrodes immersed in the sample liquid comprises a metal tube and each of the capillaries is inserted in a respective metal tube.

14. (New) A capillary array electrophoresis apparatus according to claim 8, wherein each of the electrodes immersed in the sample liquid comprises a metal tube and each of the capillaries is inserted in a respective metal tube.

15. (New) A capillary array according to claim 13, wherein each end of the capillaries projects from the respective metal tube.

16. (New) A capillary array electrophoresis apparatus according to claim 14, wherein each end of the capillaries projects from the respective metal tube.

17. (New) A capillary array according to claim 7, wherein at the light detection portion the plurality of capillaries are arranged on a substrate.

18. (New) A capillary array electrophoresis apparatus according to claim 8, wherein at the light detection portion the plurality of capillaries are arranged on a substrate.

19. (New) A capillary array according to claim 17, wherein the substrate is provided with a groove which permits laser beams to pass therethrough and a bottom of the groove is processed so as to reduce reflection of fluorescence.

20. (New) A capillary array electrophoresis apparatus according to claim 18, wherein the substrate is provided with a groove which permits laser beams to pass therethrough and a bottom of the groove is processed so as to reduce reflection of fluorescence.

21. (New) A capillary array according to claim 9, wherein the substrate is provided with a groove which permits laser beams to pass therethrough and a bottom of the groove is processed so as to reduce reflection of fluorescence.

22. (New) A capillary array electrophoresis apparatus according to claim 10, wherein the substrate is provided with a groove which permits laser beams to pass therethrough and a bottom of the groove is processed so as to reduce reflection of fluorescence.

23. (New) A capillary array according to claim 19, wherein the substrate has a black coating at the back surface thereof.

24. (New) A capillary array electrophoresis apparatus according to claim 20, wherein the substrate has a black coating at the back surface thereof.

25. (New) A capillary array according to claim 21, wherein the substrate has a black coating at the back surface thereof.

26. (New) A capillary array electrophoresis apparatus according to claim 22, wherein the substrate has a black coating at the back surface thereof.

27. (New) A capillary array according to claim 7, wherein the voltage application portion is adapted to be attached to a cap which holds buffer solution for immersing the sample injection ports.

28. (New) A capillary array according to claim 9, wherein the voltage application portion is adapted to be attached to a cap which holds buffer solution for immersing the sample injection ports.